QZX

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EDITOR'S NOTES

K5XY

You have already received the bad news and the good news. The bad news was that the last QZX slipped out of the right month again. I just had too much writing of various kinds to do including the writing of a proposal that might pay my salary for part of next summer. The good news was that the April QZX was more readable. The major reason was that I finally learned to reink my printer ribbon. It's easy once you know how. You just remove the ribbon and punch a little piece of metal.

There is a lot to this desktop publishing. You can pay a lot of money and get a flexible program which takes too long to learn, or you can get a cheap one which is easy to learn but does not do what you want it to do all the time. Last month, when I put the page image in the correct place on the sheet, the headers disappeared. There are subtle differences between 0 and O, 1 and l, and even more subtle differences between beginning and ending quotes. I never did get them figured out. Quotes were not even mentioned in my manual. I also had a hard time getting the spaces between elements of the program to come out right for the publishing program yet not mislead the reader as to what is to be typed into the computer.

The fonts do make a difference too. I accidentally switched the font used for the article titles with the font used for the body of the text. Although the size was the same, it was much harder to read.

I got a hand scanner to help put programs into my computer without retyping which tends to introduce errors. However, if you do not want to treat the program as a picture, you must use a special scanner program to recognize words and to translate them into characters. My program boasts of an error rate of less than 95%. Unfortunately by that they mean that the program will recognize 95% of the characters it sees. I guess it does do that. The trouble is that it recognized about 50% of them incorrectly. Ah well, it did not have a very good original to work with. Maybe someone will send me a freshly printed program to put in next month.

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Several histories of the QL have appeared in recent newsletters. Some interesting information includes the estimate that there are between 1,500 and 2,000 QL users in North America. Most of the stock of QL now resides at Sharp's of Mechanicsville VA, and the rights to QDOS and the right to buy 1,000 or more QL resides with Mechanical Affinity, (see Vendor article in last QZX).

Bob, WA6DLI sent a packet note to QZX saying that his QL was back working on packet. He even has it working without the modaptor. He uses the QCode Terminal program. The serial port is configured for 8N1 at 23400 baud and goes to a MFJ-1278 TNC. He says that log capture works smoother to a RAM disk then to a floppy. He has a Trump card installed. I have asked him to write a more complete article on his set-up.

UNCLASSIFIED ADS

WANTED: UNCLASSIFIED ADS for publication in QZX. Cost is 1 cent for each keystroke (characters, blanks, etc.). Payment must be included with

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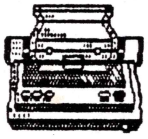


order. This is an excellent way to sell your program or unwanted equipment, ask for help, or find a specific program. Send your ad with payment to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

QZX discount: 15% discount on all orders mentioning QZX. T & C Services (address in ad in this issue.)

FREE: One Byte-Back M 16 16 K RAM (no printed circuit board on the feed through socket). Contributed by KA8THG. It would be appreciated if a contribution toward the mailing expenses were made. Send requests to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE: Back issues of QZX, $1.00 each postpaid. QZX, 2025 O'Donnell, Las Cruces, NM 88001.

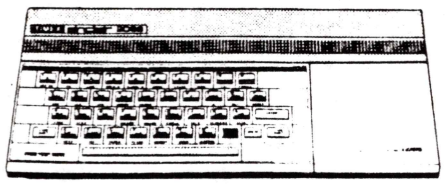
FOR SALE: CP/M books. Almost new. Half original price. *The Programmer's CP/M Handbook* by Andy Johnson-Laird. Osborne. Hardback. 500 pages $419. *The Byte Guide to CP/M* by Mark Dahmke. Mc Graw Hill. 250 pages. $8.50. *CP/M Users Guide* by Thom Hogan. Osborne. 330 pages. $8.95. *The CP/M Plus Handbook* by Alan R. Miller. Sybex. 250 pages. $7.5. *Inside CP/M Plus* by David E. Cortesi. Holt-Rinehart. 260 pages. $9.25. *CP/M Bible* by Waite and Angermeyer. Howard Sams. 430 pages. $9.90. *Users Guide to CP/M Systems* by Bove and Rhodes. Baen. 300 pages. $4.50. $1.00 each shipping and handling. A. F. Burr, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE Z88 computer w/ 128K & 35K ram cartridges & WORDMONGERS. Best offer over $200 received by August 10, '92. Will ship UPS, price plus freight collect. Coyt Hackett P O Box 1955 Mariposa, CA 95338 (209) 966 2180.

QZX FRIENDS

W1DRD - Harry, a long time QZX subscriber, was mentioned as supporting the Times/Sinclair North American User Groups organization too.

W4EDL -- Bob renewed, sent a generous contribution to the postage fund, and said that his RTTY and AMTOR plans are now going forward after a bout with a lung infection. He has a new TEN-TEC Argonaut to work with.



TS1500 SYSTEM VARIABLES

K5XY

The last several issues of QZX had some reference information about the TS2068. This issue will have some about the TS1500. Not very many readers have a TS1500 but that will not reduce the usefulness of this information because the TS1000 (and the ZX81) has the same internal workings. In fact the TS1500 is just the TS1000 with a chiclet keyboard instead of a membrane keyboard.

The bytes in memory from 16384 to 16508 are set aside for specific uses by the system. You can peek them to find out various things about the system, and some of them can be usefully poked. They are listed here with their uses.

To peek a location use the PEEK command in BASIC. PEEK 16500 yields the value of the byte in memory whose address is 16500. Of course you have not yet told the computer to do anything with it so you usually write A = PEEK 16500 or PRINT PEEK 16500 to have the computer put the value obtained in the variable A or to print it. (The number after PEEK is rounded to the nearest integer if necessary. You get error B if the number is not in the range 0 to 65535.) To poke a location write POKE m,n where m is the address in RAM where the value n is to be stored. (If m and n are not in the range 0 <= m <= 65536 or -255 <= n <= 256 you get error B.) More complicated examples of using PEEK and POKE with the system variables are given at the end of this introduction.

These are called system variables and carry names, but do not confuse them with the variables used by BASIC. You cannot use the names in a BASIC program: they are simply mnemonics that are used to make it easier to refer to the variables.

The abbreviations in column 1 have the following meanings.

- X The variable should not be poked, because the system might crash.
- N Poking the variable will have no lasting effect.
- S The variable is saved by SAVE.

The number in column 1 is the number of bytes in the variable For two bytes, the first one is the *less* significant byte - the reverse of what you might expect. So to poke a value v to a two-byte variable at address n, use

POKE n,v-256*INT(v/256)

POKE n+1,INT(v/256)

and to peek its value, use the expression

PEEK n + 256*PEEK (n+1).

Of course, if you want to see the peek value, you will have to PRINT it.

The System Variables

Notes	Address	Name	Contents
1	16384	ERR_NR	1 less than the report code. Starts off at 255 (for −1), so **PEEK** 16384, if it works at all, gives 255. **POKE** 16384,n can be used to force an error halt: 0<=n<=14 gives one of the usual reports, 15<=n<=34 or 99<=n<=127 gives a non-standard report, and 35<=n<=98 is likely to mess up the display file.
X1	16385	FLAGS	Various flags to control the BASIC system.
X2	16386	ERR_SP	Address of first item on machine stack (after **GOSUB** returns).
2	16388	RAMTOP	Address of first byte above BASIC system area. You can poke this to make **NEW** reserve space above that area or to fool **CLS** into setting up a minimal display file.
N1	16390	MODE	Specifies K, L, F or G cursor.
N2	16391	PPC	Line number of statement currently being executed. Poking this has no lasting effect except in the last line of the program.
S1	16393	VERSN	0 Identifies 8K ROM in saved programs.
S2	16394	E_PPC	Number of current line (with program cursor).
SX2	16396	D_FILE	See Appendix D.
S2	16398	DF_CC	Address of **PRINT** position in display file. Can be poked so that **PRINT** output is sent elsewhere.
SX2	16400	VARS	See Appendix D.
SN2	16402	DEST	Address of variable in assignment.
SX2	16404	E_LINE	See Appendix D.
SX2	16506	CH_ADD	Address of the next character to be interpreted: the character after the argument of **PEEK**, or the **ENTER** at the end of a **POKE** statement.
S2	16408	X_PTR	Address of the character preceding the marker.
SX2	16410	STKBOT	See Appendix D.
SX2	16412	STKEND	
SN1	16414	BREG	Calculator's b register.

The System Variables

Notes	Address	Name	Contents
SN2	16415	MEM	Address of area used for calculator's memory. (Usually MEMBOT, but not always.)
S1	16417	not used	
SX1	16418	DF__SZ	The number of lines (including one blank line) in the lower part of the screen.
S2	16419	S__TOP	The number of the top program line in automatic listings.
SN2	16421	LAST__K	Shows which keys pressed.
SN1	16423		Debounce status of keyboard.
SN1	16424	MARGIN	Number of blank lines above or below picture—31.
SX2	16425	NXTLIN	Address of next program line to be executed.
S2	16427	OLDPPC	Line number to which **CONT** jumps.
SN1	16429	FLAGX	Various flags.
SN2	16430	STRLEN	Length of string type designation in assignment.
SN2	16432	T-ADDR	Address of next item in syntax table (very unlikely to be useful).
S2	16434	SEED	The seed for **RND**. This is the variable that is set by **RAND**.
S2	16436	FRAMES	Counts the frames displayed on the television. Bit 15 is 1. Bits 0 to 14 are decremented for each frame sent to the television. This can be used for timing, but **PAUSE** also uses it. **PAUSE** resets bit 15 to 0 and puts in bits 0 to 14 the length of the pause. When these have been counted down to zero, the pause stops. If the pause stops because of a key depression, bit 15 is set to one again.
S1	16438	COORDS	x-coordinate of last point **PLOT**ted.
S1	16439		y-coordinate of the last point **PLOT**ted.
S1	16440	PR__CC	Less significant byte of address of next position for **LPRINT** to print at (in PRBUFF).
SX1	16441	S__POSN	Column number for **PRINT** position.
SX1	16442		Line number for **PRINT** position.
S1	16443	CDFLAG	Various flags. Bit 7 is on (1) during compute and display.
S33	16444	PRBUFF	Printer buffer (33rd character) is **ENTER**.
SN30	16477	MEMBOT	Calculator's memory area; used to store numbers that cannot conveniently be put on the calculator stack.
S2	16507	not used	

73, K5XY

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